Euclid Book One Definitions Explained.

Book One. Definitions.

It may be an odd thing to notice, but if one is going to critique these definitions, they ought to know what Euclid knew as a Platonist. Plato was a top-notch grammar teacher who taught Dialectic; grammar in accordance with the two elements of a thing. Confucius called it the rectification of names. The Bible calls it judgment. Many a fool has commented upon these definitions not showing any comprehension of what a definition is and these Einsteins have their sycophants.

A thing is defined as a combination of the names for a thing's elements, that is its names for the correlative and relative. A definition describes each element and gives it a name, these are not definitions, they are the names of the parts of the thing and combined they form the definition. Therefore, the following are descriptions in volving the names of the parts of things, and how they are combined with the final name of some one thing. Every grammar system starts with this convention of names, so, if you cannot get through the convention of names, then, it is assumed, that you are really stupid, and nobody cares if your name is Einstein.

And since Geometry starts as a wholly metaphorical system of grammar, we will do what Heath forgot to do. Show the actual Geometric Grammar paired with each so-called definition. Grammar is a biological product. We have to learn to say what we see. If nothing is being shown, nothing can be said about it. Historically, fools have spent their life arguing about words, too stupid to set before themselves a standard paradigm, a standard of perception to name and discuss. This is not how Geometry functions. When we religiously adhere to a convention of names, then it becomes apparent, using your very own eyes, how out of order these definitions in Euclid are. Objects which we perceive do not contradict themselves, we do, and since all we can do is name them and their parts, it should be obvious that when we argue about things, we have been too stupid to "rectify names." All we can do, is name and use them. Every war, every evil thing man does to his fellow man, is because he has always been too stupid to do his biologically defined job.

The figure is the definition, the task is learning how to put it into Common Grammar. Now, if that is too hard for you, it is not anyone's problem but your own. The inability to participate in a simple naming convention, is not a proof of anything but a person's ignorance and stupidity. One would think that Heath never saw works of others who tried to make a school-book from a school-book. I am going to start with the general, or Common Grammar names for the two parts of things, the analog graphic is the Geometric Grammar we are pairing with Common Grammar, therefore, it is imperative that the graphics be correct, that they show all we are to discuss, for the graphics are more important than our quibbling over what to name what we see:

13. A boundary is that which is an extremity of anything.

In common grammar it is called a noun. In generic terms, a container. In Plato, noun, definition, form, shape, limit, correlative.

14. A figure is that which is contained by any boundary or boundaries.

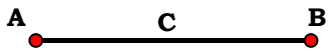
Aristotle devoted sufficient explanation of this process, yet self-proclaimed Aristotelians still remain illiterate. Aristotle learnt it from Plato. Now, if you cannot discern the difference between quality, i.e., the material of a thing, and quantity, the shape of a thing, then you cannot distinguish between a noun and a verb. I confess, I have a problem with this myself, especially in today's market.

In common grammar, that which is contained, the relative difference is called a verb. These two, reside over every process of definition as a process of naming and therefore, by fact those statements belong first, but are towards the end, which informs us that this work was never actually completed by Euclid, in fact, he may have perished before it was. Or its order was changed by a lesser mind. The obvious indication of a third, and less intelligent hand, is that one thing is defined, but by some magic an adjective suddenly appears attached to that thing, indicating a mystical thing undefined. I will excise these. I know many people have a hard time keeping on topic, but there has never been a graffiti law in regard to artifacts before recent times. Sadly, there are many wannabe intellectuals who are the first to grab a paint can.

In short, since everything is a collective of relatives and correlatives, our first principle is the simplest thing possible, that which can only be parsed in terms of the names of the elements themselves. These are often simply called First Principles for the First Principle Parts of a Thing.

It is important to know, as a matter of fact disregarded by many self-proclaimed intellectuals, the diagrams, as they are called, are the grammar of Geometry. It is not the names we attach to the figures; it is not the proofs in any particular grammar system other than the figure, it is the figure, itself. I have seen too many books of trash, with the name Geometry on their cover, and one is hard pressed to find any geometry at all in those books. That is as stupid as one can get.

One Dimension



A line is also called a one-dimensional thing, i.e., is only mentionable by these two elements.

A line is also produced using a straightedge. We cannot define or speak about anything until we produce it. And we produce it with our own hand. So, if you cannot draw a straight line, then you can take all the time you want to argue with yourself.

1. A **point** (A, B) is that which has no part.

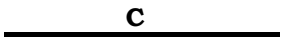
That which parses a relative difference reduces to that which parsing can no further go, to the elementary parser, called a point. This divider cannot be divided.

A **line** is breadthless length.

Some people are so neurotic, that by definition one cannot see length or a point, i.e., the grammar indicates only the intelligible, which unfortunately, few seem to possess, but neither can you see a cat in the word cat. If their neurosis really bothers them, they should not talk at all; at least people can mistakenly believe that they are intelligent for not doing so. So, if they become hostile, well…

The extremities of a line are **points**.

A **line** is a line which lies evenly with the points on itself.



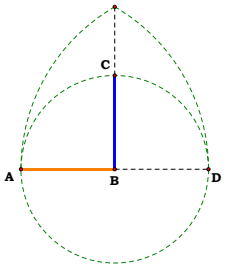
Often called linear, and linearity. In short, we have described these two elements of a thing, with more than one set of words which should be familiar to one.

One can, of course, go on and on with describing how to denote each of these two elements, and of course, some people will always be too thick to comprehend it.

Two Dimensions

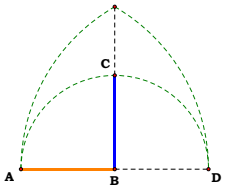
How badly out of order are these definitions? Really bad. If you will recall, all we can do as a mind, is parse information. All we can do with our hand, is parse the environment. So, before we can claim to define anything we have to follow fact. We cannot define surface, angle anything, until we describe it with the compass. We have not produced anything save a line with our hand, now we have to describe the universe of discourse with it. We have to define, name, describe, what we produce with the compass. We cannot talk about it in figure, until we produce it. We have defined our line, our unit above, we must now use it with our compass in order to continue with the definitions.

15-16. A **circle** is an intelligible figure contained by one point (B) called the center of the circle, chosen from our given line (AB) such that all the lines implied by it are equal to the line we previously described. The circle is also called a loci for it is a mathematical product of the recursion of our line.



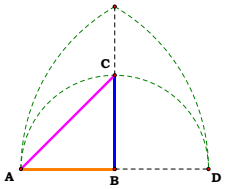
17. A **diameter** of the circle is the collinear sum of two of its lines called radii. In mathematical expression AD = 2 × AB.

18. A **semicircle** is the figure contained by the diameter which divides the circumference in half. The center of the semicircle is the same as that of the circle.



5. A **plane** is that which has length (AB) and height (BC) only.

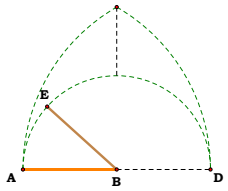
6. The **extremities** of a **plane** are **lines** (AB, BC, AC), namable in length only.



7. A plane's **surface** is a surface with which lines evenly lay.

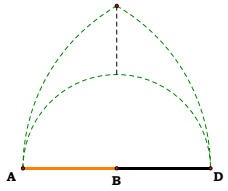
Names for relative differences now include the term *surface*.

8. An **angle** is the inclination to one another of two lines in a plane which meet one another and are not colinear.



An angle is not defined as a figure, but as a ratio.

23. **Parallel** lines are lines which are not inclined one to the other.



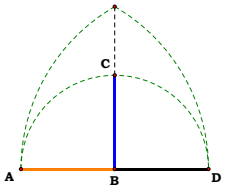
In other words, the inclination is 0. Therefore, colinear, in one sense, means parallel, i.e., no inclination. Inclination has nothing to do with where a line is placed in a plane, but how its inclination, a mathematical ratio, is determined. In short, if you are so lame as to believe that a line somehow is effected by gravity and starts to sink under its own burden of obesity and eventually meets a companion line, at a bar called Infinity in order to become one, in some heat of passion, then you confuse a computation with things, as the things themselves. And as far as our two star struct lines, do they start sinking together in wholly matrimony, or does one rise and the other sinks and end up alone somewhere? Stay tuned for another episode of Haze of our Life! Gosh, I hope I don't get arrested for hazing.

[9. And when the lines containing the angle are straight, the angle is called **rectilineal**.]

Why is this description out of place? Has any other line been defined which is not straight by definition? No. Is any grammar at all the product of scribbling recursion? No. Now, it is highly unlikely that Euclid, a Platonist would have so quickly forgotten that there is one, and only one definition of a thing, therefore, this new distinction, is not original to either the definitions themselves or to anyone rational. Secondly, there can only be one of two conditions, and that has been described, defined, yet this statement is ignoring what has been defined, implying something quite impossible. Those hands which made these emendations were demonstrably, illiterate.

Again, I am excising this illiteracy.

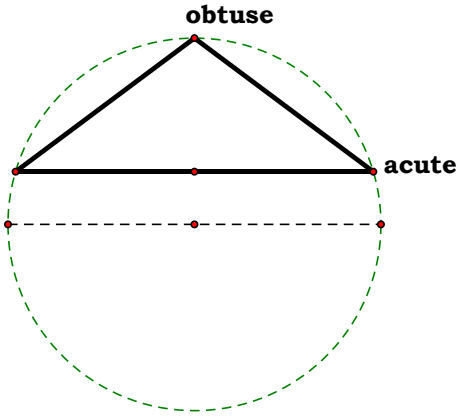
10. When two lines make the adjacent angles equal to one another, each of the equal angles is **right**, and these lines are called a **perpendicular** to each other.



One will note, this ratio is a one-to-one ratio. Since the inclination of angles can only go between 0 and 1, this is the standard, the perpendicular is the same as the height of a triangle at the ratio 1.

11. An **obtuse angle** is an angle greater than a right angle.

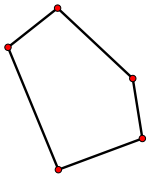
12. An **acute angle** is an angle less than a right angle.



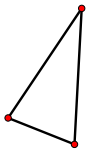
In short, when one does not have a perpendicular situation, one angle is less and the other greater than the perpendicular.

Classification of linear figures.

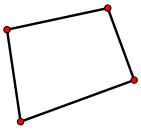
19. **Rectilineal figures** are those which are contained by lines,



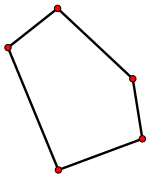
trilateral figures being those contained by three,



quadrilateral those contained by four, and

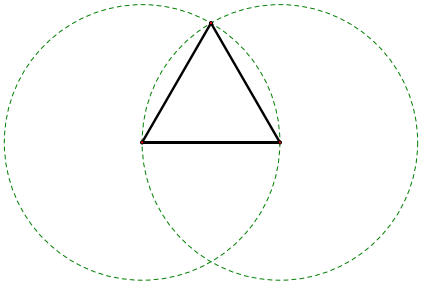


multilateral those contained by more than four lines.

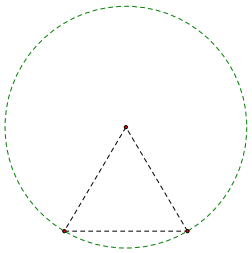


One will notice, the circle is not among them.

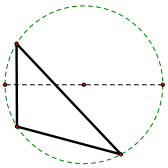
20. Of trilateral figures, an **equilateral triangle** is that which has its three sides equal,



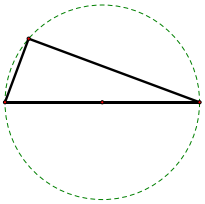
an **isosceles triangle** that which has two of its sides alone equal,



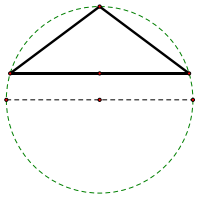
and a **scalene triangle** that which has its three sides unequal.



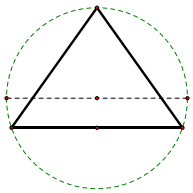
21. Further, of trilateral figures, a **right-angled triangle** is that which has a right angle,



an **obtuse-angled triangle** that which has an obtuse angle,

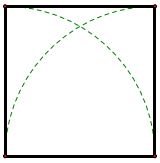


and an **acute-angled triangle** that which has its three angles acute.



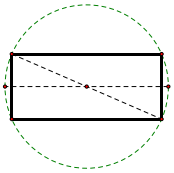
I drew these so that you can see the origins of the names in relationship to their construction in a circle.

22. Of quadrilateral figures, a **square** is that which is both equilateral and right-angled;



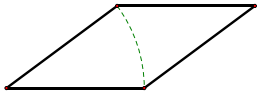
i.e., in a given circle, its two diameters are equal to the circles.

an **oblong** that which is right-angled but not equilateral;



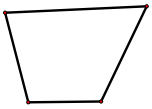
i.e., in a circle, one diameter is equal to the diameter of the circle, the other is less.

rhombus that which is equilateral but not right-angled;



and a **rhomboid** that which has its opposite sides and angles equal, to one another but is neither equilateral nor right-angled.

And let quadrilaterals other than these be called **trapezia**.



Despite all of its faults, the *Elements* of Euclid is still, today, the most correct grammar book on the planet. That is sad, very sad. No one I know of has even recognized it not only as a grammar book, but a grammar book Plato, the founder of formal grammar, helped to produce. And you may also know, Plato was still working on geometry the day he died.